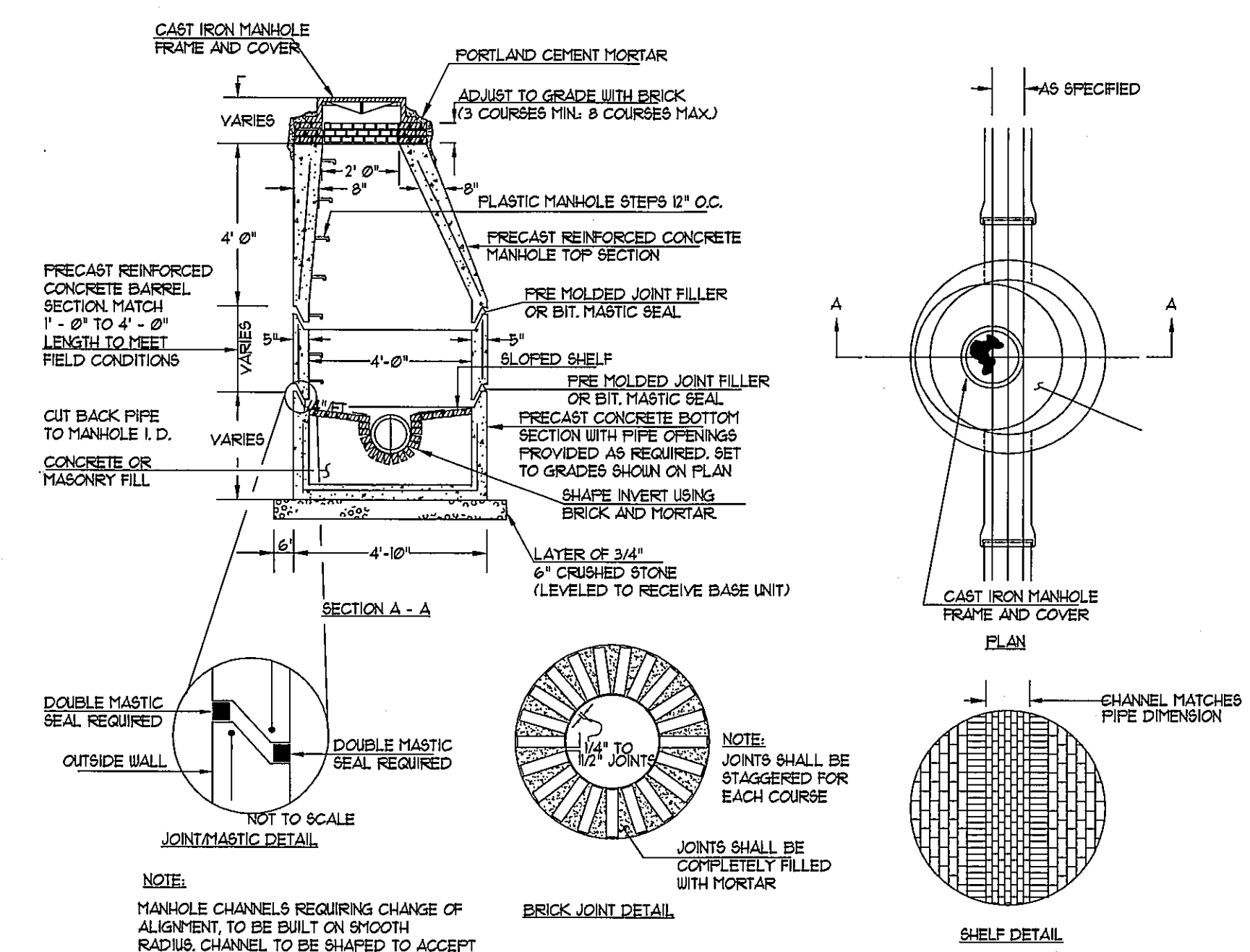
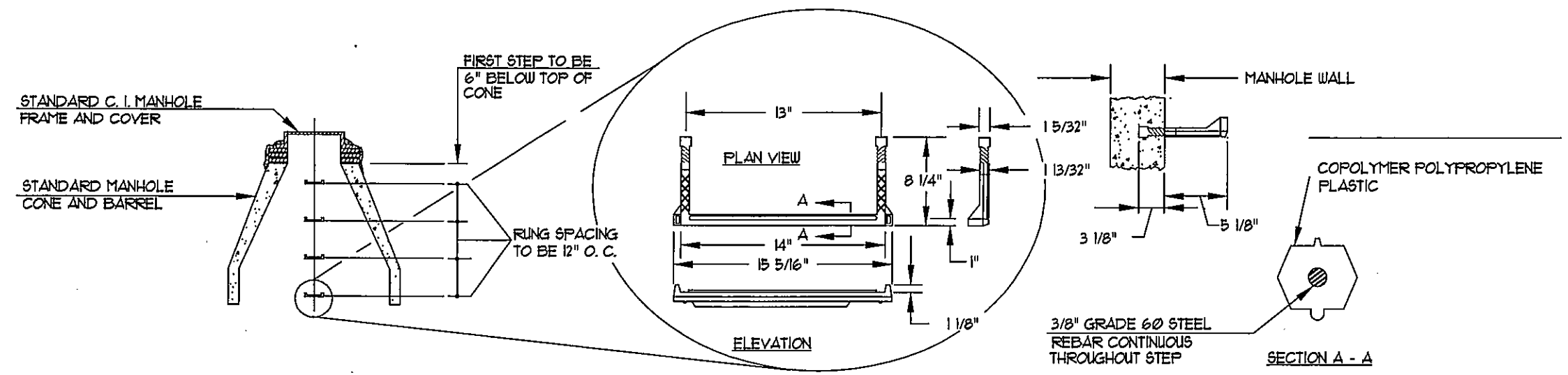


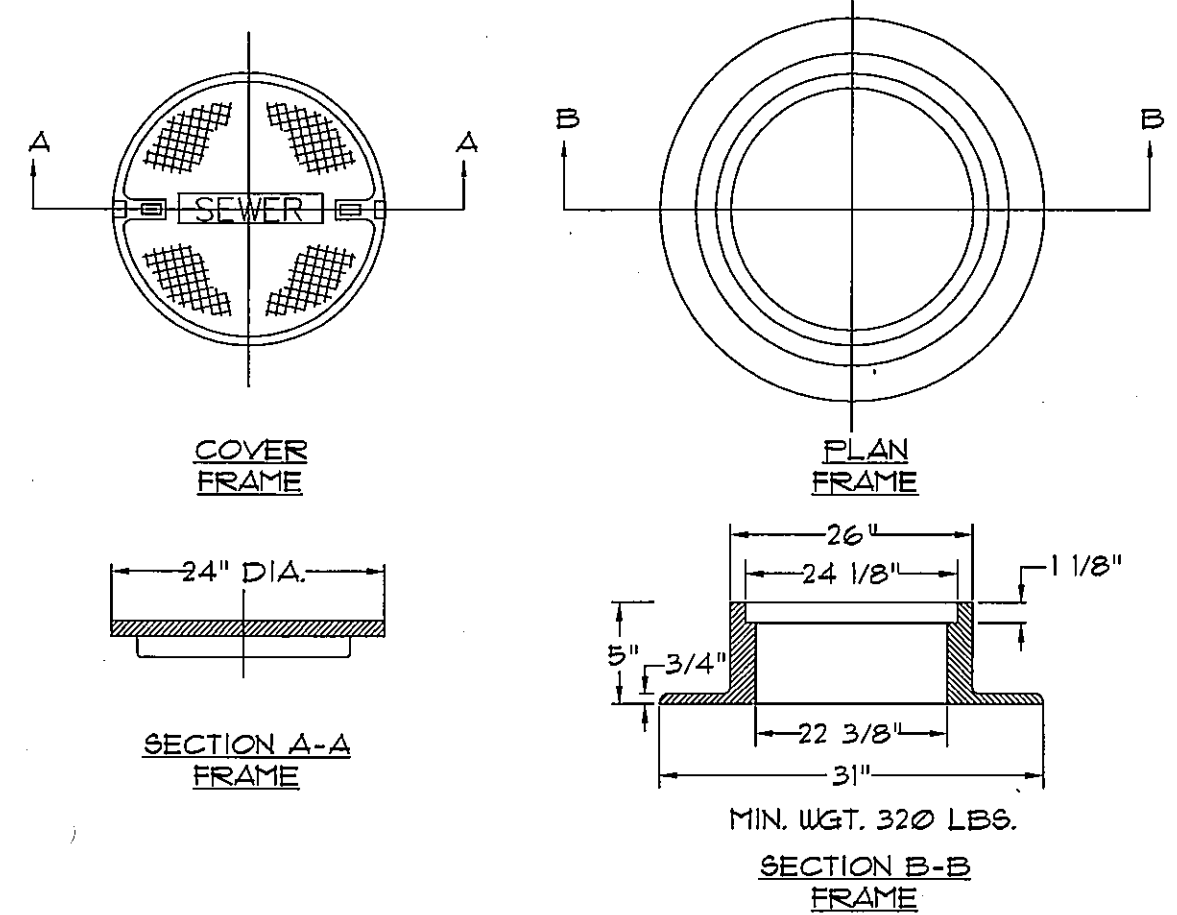
**TYPICAL PAVEMENT GRADING ON SLOPES FOR CATCH BASIN AND INLET**  
NOT TO SCALE



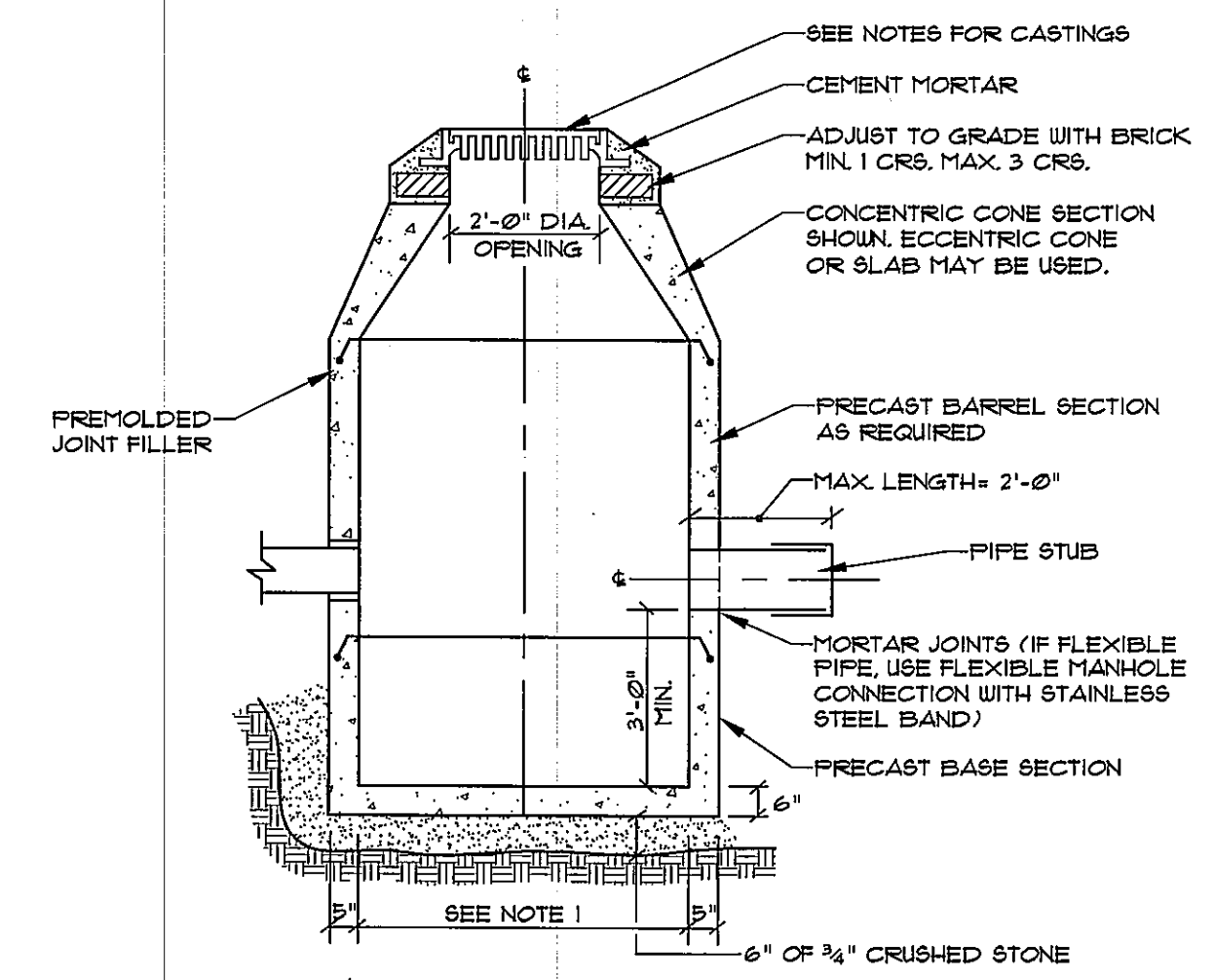
**PRECAST CONCRETE MANHOLE TYPE "A"**  
NOT TO SCALE



**PLASTIC MANHOLE STEPS**  
NOT TO SCALE

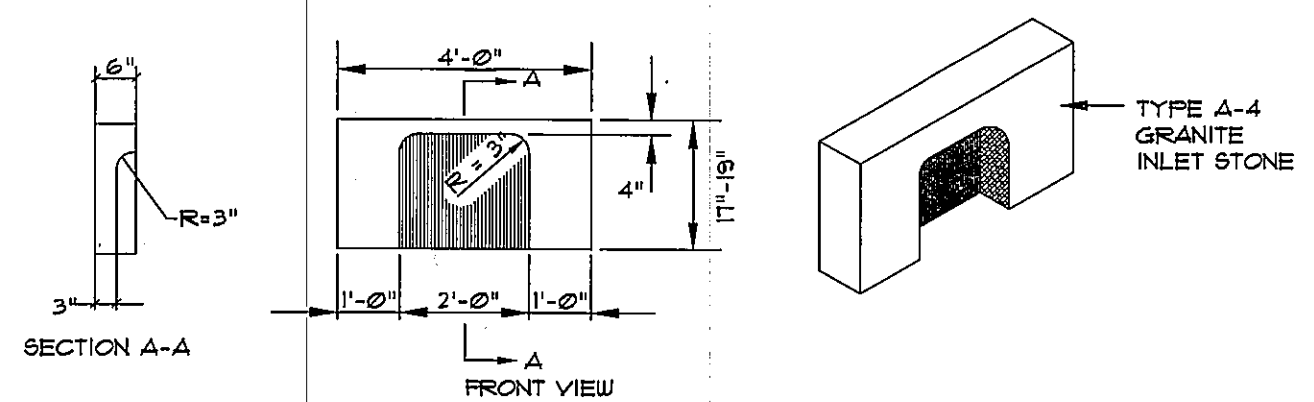


**CAST IRON MANHOLE COVER AND FRAME**  
NOT TO SCALE



- NOTES:**
- 4'-0" ID. TYPICAL. SOME STRUCTURES MAY REQUIRE LARGER ID. PROVIDE SHOP DRAWINGS.
  - DRAINAGE STRUCTURES TO BE DESIGNED FOR H-20 LOADING.
  - PIPE SIZES AND INVERTS AS NOTED ON PLANS.
  - CATCH BASIN FRAME AND GRATE TO BE EAST JORDAN FOUNDRY 5250, OR APPROVED EQUAL.
  - DRAINAGE MANHOLE FRAME AND COVER TO BE EAST JORDAN FOUNDRY 112, TYPE A, OR APPROVED EQUAL. COVER SHALL BE MARKED "DRAIN".
  - ALL DRAIN MANHOLES SHALL HAVE SHELVEYS AND CHANNELS INSTALLED.

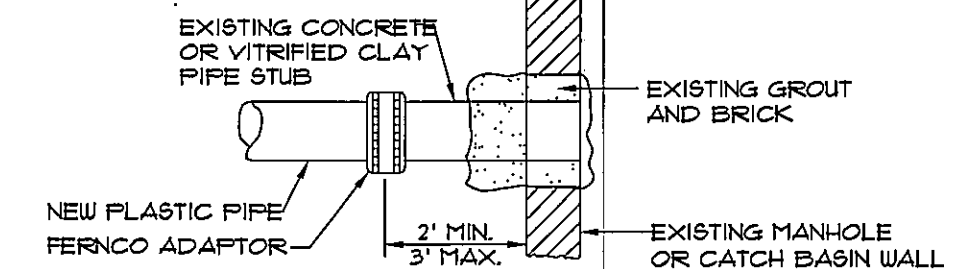
**TYPICAL DRAINAGE MANHOLE/CATCH BASIN**  
NOT TO SCALE



**TYPE A-4 GRANITE CATCH BASIN INLET STONE DETAIL**  
(FOR EXISTING BASIN AT HANCOCK STREET)  
NOT TO SCALE

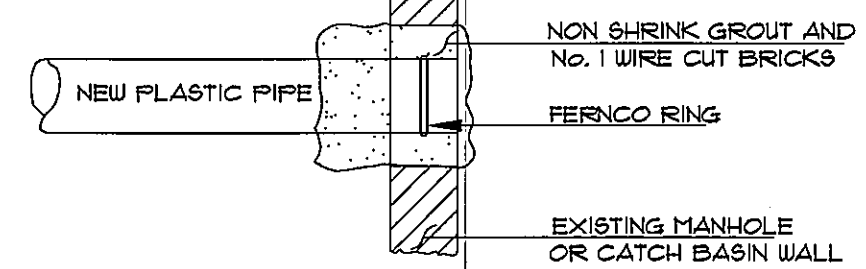
**GENERAL NOTES FOR MANHOLES AND CATCH BASINS**

- ALL CONCRETE SHALL BE CLASS "A" AND HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 PSI. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
- PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C-418-67.
- SEWER BRICK SHALL CONFORM TO ASTM SPEC. DESIGNATE ON C-32-63, GRADE MA AND SA.
- ALL MANHOLES SHALL HAVE A BITUMINOUS WATERPROOFING APPLIED TO THE EXTERIOR SURFACE. IF CONSTRUCTED OF BRICK MASONRY, SURFACE SHALL BE PLASTERED WITH A SMOOTH MORTAR FINISH 3/8" THICK. AFTER THE MORTAR HAS SET, THE SURFACE SHALL BE WATERPROOFED AS REQUIRED BY SUPPLEMENTAL SPECIFICATIONS SECTION 604.
- CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35. ALL PARTS OF CASTINGS, EXCEPT FINISHED SURFACE, SHALL RECEIVE A COAT OF COAL TAR PITCH VARNISH OR ASPHALTUM PAINT WHICH SHALL BE SMOOTH AND TOUGH BUT NOT BRITTLE.
- MANHOLES MAY BE CONSTRUCTED OF MASONRY, PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
- ALL PRECAST MANHOLES AND CATCH BASINS SHALL BE IDENTIFIED BY STATION AND OFFSET, PAINTED ON THE SIDE OF THE STRUCTURE BY THE MANUFACTURER.
- EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
- ALL WORK WITHIN THE STREET RIGHT-OF-WAY SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
- ALL CATCH BASIN OUTLET PIPES SHALL BE INSTALLED WITH AN OIL AND FLOATABLES SEPARATOR. THE SEPARATOR SHALL BE THE "SNOUT" OR AN APPROVED EQUAL AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- MANHOLE FRAME, GRATE AND COVERS SHALL COMPLY WITH CITY OF PORTLAND TECHNICAL STANDARDS AND REQUIREMENTS.



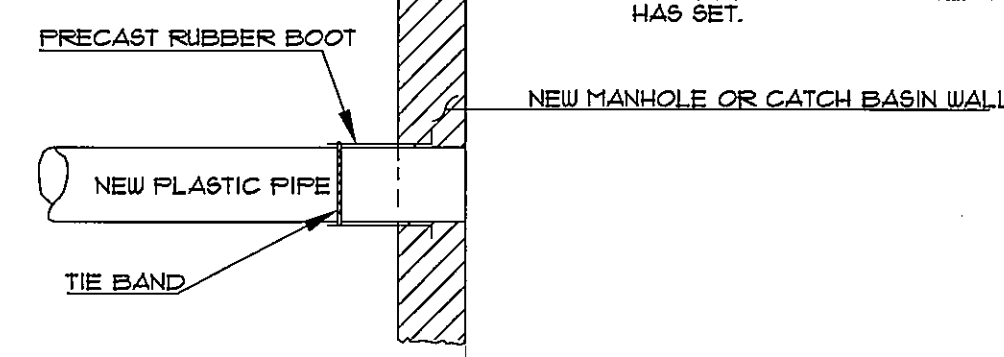
**METHOD 4 - NEW PIPE TO EXISTING STRUCTURE STUB**

**NOTE:** EXISTING MANHOLE OR CATCH BASIN SHALL BE CORE DRILLED FOR PIPE INSTALLATION. IF PIPE DIAMETER IS SO LARGE THAT CORE DRILLING IS PROHIBITED, THE CONTRACTOR MAY USE ANY COMBINATION OF JACK HAMMERING AND SAW CUTTING THE STRUCTURE TO CREATE PIPE OPENING. THE NEW OPENING MUST THEN BE SEALED AND WATERTIGHT BOTH INSIDE AND OUTSIDE THE STRUCTURE.



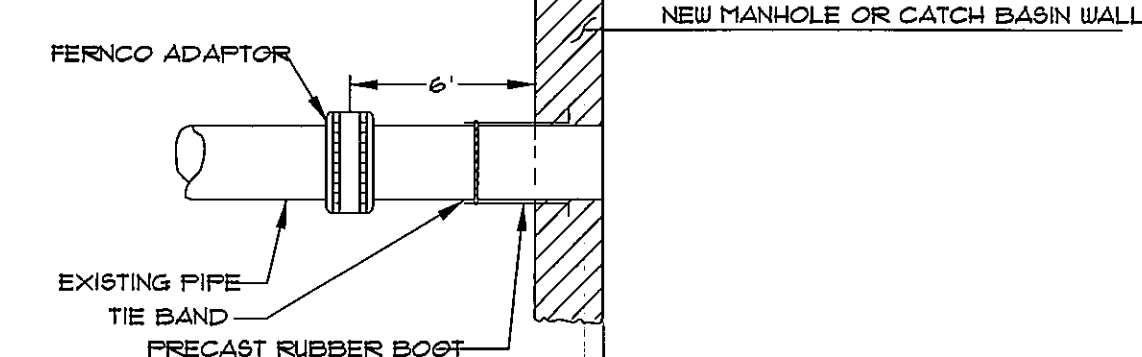
**METHOD 3 - NEW PIPE INTO EXISTING STRUCTURE**

**NOTE:** REMOVE WATERPROOFING FROM STRUCTURE BEFORE APPLYING MORTAR. WATERPROOF AGAIN AFTER MORTAR HAS SET.



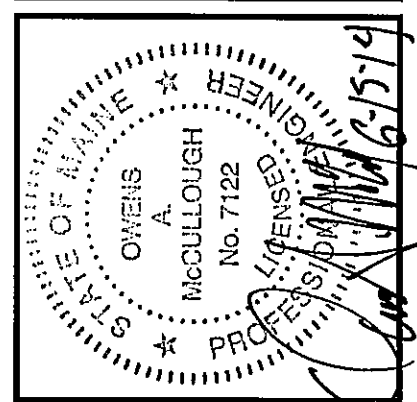
**METHOD 2 - NEW CONSTRUCTION**

**NOTE:** REMOVE WATERPROOFING FROM STRUCTURE BEFORE APPLYING MORTAR. WATERPROOF AGAIN AFTER MORTAR HAS SET.



**METHOD 1 - EXISTING PIPE INTO NEW STRUCTURE**

**PLASTIC PIPE CONNECTION DETAIL**  
NOT TO SCALE



PROJECT NO.	13251
DATE	07-26-13
SCALE	AS SHOWN
CITY SUBMITTAL 8	06-20-14
FOUNDATION PERMIT SET	06-12-14
CITY SUBMITTAL 7	01-07-13
CITY SUBMITTAL 6	10-15-13
CITY SUBMITTAL 5	10-03-13
CITY SUBMITTAL 4	09-17-13
CITY SUBMITTAL 3	09-03-13
DATE:	09-03-13
BY:	
REV:	

**SEBAGO TECHNICAL SERVICES**  
WWW.SEBAGO-TECHNICAL.COM  
75 John Roberts Rd., Suite 1A  
South Portland, ME 04106  
Tel: 207-260-2100

PROJECT NO. 13251  
DESIGN: WTC  
CHKD: WTC  
DRAWN: WTC  
MAL

**SEAPORT LOFTS**  
NEWBURY/HANCOCK STREET  
PORTLAND, MAINE  
FOR: 113 NEWBURY STREET, LLC  
35 FAY STREET, SUITE 407B  
BOSTON, MA 02118-4320

DATE	SCALE
07-26-13	AS SHOWN